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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,173	09/19/2003	David H. Palmer	1-37091	7108
43935 7590 03/19/2008 FRASER CLEMENS MARTIN & MILLER LLC 28366 KENSINGTON LANE PERRYSBURG, OH 43551				
EXAMINER				
HURLEY, KEVIN				
ART UNIT		PAPER NUMBER		
3611				
NOTIFICATION DATE		DELIVERY MODE		
03/19/2008		ELECTRONIC		

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* DAVID H. PALMER

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Appeal 2008-0300  
Application 10/666,173  
Technology Center 3600

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Decided: March 17, 2008

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Before TONI R. SCHEINER, ERIC GRIMES, and RICHARD M.  
LEBOVITZ, *Administrative Patent Judges*.

LEBOVITZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1, 2, 4, 6, and 7. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

### STATEMENT OF THE CASE

The claims are directed to a receiver tube for a trailer hitch assembly. Claims 1, 2, 4, 6, and 7, which are all the pending claims in this application, are appealed. Appellant requests review of the following rejections:

1) Claims 1, 2, 4, 6, and 7 as anticipated under 35 U.S.C § 102(e) by Roe (U.S. Patent 6,408,672 B1, June 25, 2002) (Ans. 5); and

2) Claim 4 as lacking written description under 35 U.S.C. § 112, first paragraph (Ans. 4-5).

For the purpose of deciding all issues in this appeal, we focus on independent claims 1, 4, and 6. Claims 1, 4, and 6 read as follows:

1. An elongate receiver tube for a trailer hitch assembly comprising:

a hollow elongate tube having an internal rectangular cross-section and having a first end adapted to receive a trailer hitch bar having a complimentary outer rectangular cross-section, the first end of said tube having an integral reinforcement construction wherein the first end of said tube is provided with an outwardly extending fold formed of substantially two thicknesses of the tube, wherein the outermost end portions are folded against one another by a cold forming process to form a peripheral outwardly extending fold at the first end of said tube, the fold having an inner dimension which is substantially the same as an inner dimension of said tube and an outer dimension greater than [sic] an outer dimension of said tube, wherein the fold has a rounded outer surface.

4. An elongate receiver tube for a trailer hitch assembly comprising:

a hollow elongate tube having an internal rectangular cross-section and an external rectangular cross-section, said tube having a first end adapted to receive a trailer hitch bar having a complimentary outer rectangular cross-section to be slidably received in the internal rectangular cross-section of

said tube, the first end of said tube having an outwardly extending flange portion formed by a cold forming process, the flange provided with an outwardly extending fold formed of substantially two thicknesses of the tube, the flange portion having an inner dimension which is substantially the same as an inner dimension of said tube and an outer dimension greater then [sic] an outer dimension of said tube, wherein the flange portion has an orbicular outer surface.

6. An elongate receiver tube for a trailer hitch assembly comprising:

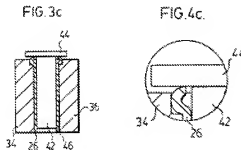
a hollow elongate tube having an internal rectangular cross-section and an external rectangular cross-section, said tube having a first end adapted to receive a trailer hitch bar having a complimentary outer rectangular cross-section to be slidably received in the internal rectangular cross-section of said tube, the first end of said tube having a fold with a protuberant outer surface, the fold formed by a cold forming process, the fold formed of substantially two thicknesses of the tube, the flange portion having an inner dimension which is substantially the same as an inner dimension of said tube and an outer dimension greater then [sic] an outer dimension of said tube.

## FINDINGS OF FACT

### *The Roe patent*

1. Roe describes a hollow elongate tube 16/26 which has a rectangular cross sectional area to be used as a trailer hitch receiver tube (Roe, at col. 2, ll. 29-30, 39-55, Figs. 1-2; Ans. 5).
2. The elongate tube (shown as 16 in Fig. 1) has a terminal end 28 to receive the hitch bar (Roe, at col. 2, ll. 49-55, Figs. 1-2; Ans. 5).

3. The terminal end 28 is “reinforced with an end portion 30, which comprises a folded portion of the receiver tube” (Roe, at col. 2, ll. 52-55; *see* Ans. 5).
4. The terminal end is formed by placing the receiver tube 26 into a die having a void space 41, and applying pressure to the terminal end 28 to produce buckling “thereby causing the tube material to fold upon itself within the void space 41” (Roe, at col. 3, ll. 7-17; *see* Ans. 5).
5. Figs. 3a-3d and 4a-4d illustrate Roe’s folding process (Roe, at col. 1, ll. 60 to col. 2, l. 19; at col. 2, l. 56 to col. 3, l. 23).
6. Figs. 3c and 4c of Roe, reproduced immediately below, show the terminal end in the process of being folded (*id.*).



7. The fold shown in Figs. 3c and 4c “has a rounded, orbicular, and protuberant outer surface” (Ans. 5).

*The claimed invention*

8. Claim 1 is directed to an elongate receiver tube for a trailer hitch assembly which comprises “a hollow elongate tube” with “an internal rectangular cross-section.”
9. The tube of claim 1 has “a first end adapted to receive a trailer hitch bar.”

10. Its end “is provided with an outwardly extending fold formed of substantially two thicknesses of the tube.”

11. The “fold has a rounded outer surface.”

12. Independent Claim 4 is directed to a tube like that of claim 1, but having “an outwardly extending flange portion” which is characterized as having “an orbicular outer surface.”

13. The term “orbicular” means “in the form of an orb, spherical or circular” (Ans. 3).

14. Independent Claim 6 is directed to a tube like that of claim 1, but the “fold” has “a protuberant outer surface.”

*Specification*

15. The Specification does not use the term “orbicular” to describe the surface of the fold.

16. Figs. 1 and 2 show the elongate receiver tube with a fold 26 with contour and shading lines, indicating that it is rounded (*see also* App. Br. 5).

17. Fig. 3 shows the fold having a rounded outer surface (*see also* App. Br. 5).

*Differences between Roe and the claimed invention*

18. Roe describes an elongate tube with a rectangular cross sectional area (FF 1; Roe, at col. 2, ll. 29-30, 39-55, Figs. 1-2; Ans. 5) as recited in claim 1 (FF 8).

19. Roe’s tube has a folded end portion to receive a hitch bar (FF 2-3; Roe, at col. 2, ll. 49-55, Figs. 1-2; Ans. 5) as in claim 1 (FF 9-10).

20. Figs. 3c and 3d show Roe's fold as having a rounded, orbicular, and protuberant outer surface (FF 7; Ans. 5), satisfying the corresponding limitations of claim 1, 4, and 6 (FF 11, 12, and 14).

## DISCUSSION

### Anticipation

Anticipation requires a showing that each element of the claim is identifiable in a single reference. *Perricone v. Medicis Pharm. Corp.*, 432 F.3d 1368, 1375 (Fed. Cir. 2005). In this case, the Examiner finds that Roe describes a trailer hitch assembly comprising a hollow elongate receiver tube which has all the elements of the claimed "elongate receiver tube for a trailer hitch assembly", including a folded end adapted to receive a hitch bar which is rounded, orbicular, and protuberant as in claims 1, 4, and 6, respectively (FF 18-20; Ans. 5). As we see no error in the Examiner's finding, we agree that Roe describes a trailer hitch assembly which meets all limitations of claims 1, 4, and 6, anticipating them under 35 U.S.C. § 102(e).

Appellant contends that Roe discloses the outer surface of the tube's end flange as rectangular, not rounded, orbicular, or protuberant as in the claimed invention (App. Br. 7-8). He argues:

it must be understood that the appellant's claims are directed to a "Receiver Tube". Figs. 3c and 4c do not show a "Receiver Tube". The drawings relied upon by the Examiner as anticipating the appellant's claimed invention show an intermediate condition of the material being formed (transitional). The final Receiver Tube of Roe is illustrated in

Fig. 4d which clearly does not have a “rounded” or other claimed configuration.

(Reply Br. 4.) In other words, Appellant’s position is that the preamble of claims 1, 4, and 6 stating that the elongate tube is a “receiver tube for a trailer hitch assembly” excludes it from encompassing the transitional form of the hitch receiver tube described by Roe and illustrated in accompanying Figs. 3c and 4c.

Preamble language that merely states the purpose or intended use of an invention is generally not treated as limiting the scope of the claim.

*Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 952 (Fed. Cir. 2006); *Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp.*, 320 F.3d 1339, 1345 (Fed. Cir. 2003). “However, the preamble is regarded as limiting if it recites essential structure that is important to the invention or necessary to give meaning to the claim.” *Bicon*, 441 F.3d at 952.

Here, the preamble of the claim states that the claimed elongate tube is a “receiver tube for a trailer hitch assembly.” We interpret this phrase to be an intended use of the claimed invention, requiring the tube to be capable of serving the trailer hitch function. The claim body specifies the structural characteristics of the tube that enable it fulfill this function, including that it have a fold or flange at its terminal end which has a rounded, orbicular, or protuberant surface (FF 11-14). Thus, as long as a tube possesses these characteristics and would be capable of serving as a receiver tube, such a tube would anticipate the claimed invention. We do not find that the claim preamble specifies any essential or further structure in addition to the structural limitations explicitly recited in the claim body.



We agree with the Examiner's determination that the intermediate or transitional form of the receiver tube of Roe as shown in Figs. 3c and 4c possesses all the elements recited in claims 1, 4, and 6, and also would be capable of performing as a receiver tube, thus anticipating them (FF 18-20). Appellant has given no reason why the structure shown in Figs. 3c and 4c would not be capable of serving as a receiver tube for a trailer hitch assembly. This structure would necessarily occur along the way of forming

a receiver tube with rectangular folds according to Roe's process.<sup>1</sup>

Although the anticipatory structure occurs as a transition during the process of forming rectangular folds, it clearly exists in the prior art as explicitly illustrated in Figs. 3c and 4c. "Description for the purposes of anticipation can be by drawings alone as well as by words." *In re Mraz*, 455 F.2d 1069, 1072 (CCPA 1972) (quoting *In re Bager*, 47 F.2d 951, 953 (CCPA 1931)). The claims do not require the structure to be the final product.<sup>2</sup> Nor is the receiver tube claimed in combination with the trailer hitch assembly or in any other way that would distinguish it from the receiver tube of Roe as shown in Figs. 3c and 4c.

For the foregoing reasons, we affirm the rejection of claims 1, 4, and 6. Claims 2 and 7 fall with claims 1, 4, and 6 because separate reasons for their patentability were not provided. 37 C.F.R. § 41.37(c)(1)(vii).

<sup>1</sup> A "prior art reference may anticipate without disclosing a feature of the claimed invention if that missing characteristic is necessarily present . . . in the single anticipating reference." *SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1343 (Fed. Cir. 2005).

<sup>2</sup> In *Abbott Labs et al. v. Baxter Pharm. et al.*, 471 F.3d 1363, 1369 (Fed. Cir. 2006), an intermediate material was found to be anticipatory to the claimed subject matter because "[c]ommercial finality" was "not claimed."

#### Written description

The Examiner contends that claim 4 fails to comply with the written description requirement under 35 U.S.C. § 112, first paragraph, because the “specification and drawings do not support the recitation that the fold is ‘orbicular’” as recited in the claim (Ans. 4).

We do not agree. The Examiner acknowledges that the drawings, such as Fig. 3, support the claimed limitation that the fold’s outer surface is rounded (Ans. 6). The Examiner defines “orbicular” to mean “an orb, spherical or circular” form (FF 13; Ans. 3). The shape of the fold’s outer surface is shown in Figs. 1-3 as being rounded (FF 16, 17) which is synonymous with circular – thus meeting the Examiner’s own definition of “orbicular” as recited in claim 4. Accordingly, we reverse the rejection under 35 U.S.C. § 112, first paragraph.

#### CONCLUSION

The rejection of claim 1, 2, 4, 6, and 7 as anticipated by Roe is affirmed. The rejection of claim 4 as lacking written description is reversed.

#### TIME PERIOD

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

**AFFIRMED**

Appeal 2008-0300  
Application 10/666,173

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